

VERMONT PAYMENT FOR ECOSYSTEM SERVICES & SOIL HEALTH WORKING GROUP
PROGRAM OBJECTIVES, ELEMENTS AND ASSUMPTIONS

(With revisions from the 4/19/2022 Working Group meeting in RED)

Caveats

- Precise terms, definitions and details will need to be developed later

Purpose

- Farmers are paid for producing ecosystem services

Ecosystem services to be Produced

1. Flood mitigation
 2. Erosion reduction
 3. Phosphorus and nitrogen retention
 4. Carbon storage
 5. Biodiversity
- Reframe in terms of what the goals are. E.g., clean water (vs P & N levels). What do we want to see? What is the natural infrastructure that we're trying to build?
 - Framing in terms of problems that we'd like to solve can lead to reduplicating programs like NRCS that are focused on solving problems/concerns.
 - Examples - Climate Regulation (through carbon, water, nitrogen, methane cycling), Water Retention/Absorption/Production, Water filtration, Provision of Food and Habitat for All Life, etc.
 - Rank these. Flood mitigation should not be first (spatially variable).

Focal Point

1. Focus on, but not exclusive to, soil health
 2. Initial phasing focused on soil, field, and edge of field
 3. Later phases focused on whole farm
- If we're not doing whole farm, how do we avoid adverse selection? i.e., farmers enrolling only their "best" fields

Eligibility

1. All farmers¹ are eligible to participate in the program if they are in good standing with the Required Agricultural Practices (RAPs)
 2. Disadvantaged farmers² have additional technical assistance to participate³
 3. Farmers are paid a base fee to participate, at least in the first year (s), which in turn will require certain paperwork, data gathering and soil sampling
- WG needs to decide how to narrow down eligibility for pilot phase.

Program Phasing

¹ RAP definition? USDA definition? Other?

² USDA definition? Other?

³ Socially Disadvantaged Farmers and Ranchers (SDFR) could also be given a higher rank in proposal review

1. The program will be phased in to allow for implementation in 2023 but able to grow in the services it pays for over time
2. The program will start as a one-year pilot/demonstration at the scale funding allows to move action forward soon, learn, and get payments into farmers' hands for producing ecosystem services
3. The pilot program will be administered by the AAFM because of its authorities and expertise and ability to get going sooner but the ultimate program administrator⁴ can be determined later and suggestions put forward now
4. The PES WG will stay engaged throughout to support, monitor, and provide guidance of the pilot program including making final recommendations for a full-fledged program and its administration based on the pilot/demonstration and its lessons
 - WG needs to have a frank conversation about AAFM as program administrator – advantages and disadvantages
 - Discuss having Conservation Districts serve as program administrator

Program Elements

1. The program will pay for ecosystem services, but may do so through evidence-based practices, modeling of outcomes enhanced by Vermont-specific data, and/or in-field measured outcomes
 - Several folks under the assumption that we would pay for outcomes. If there's consensus on that already then make that clear.
2. The program, over time, will address the whole farm but will begin with individual fields and edge of field within a farm chosen by the farmer
3. The program will use tiering that could involve: 1) enrollment and basic data collection and soil testing; 2) payments for widely supported evidence-based practices that produce ecosystem services; 3) payments for soil health and other measured outcomes with more extensive monitoring and sampling; 4) potential research or innovation tier (i.e., California program approach).
4. The program will incorporate a research element to support innovation, adaptive management and development of new practices and tools over time.
 - Distinguish between research for analysis of program development vs further innovation/new ideas (both should be included)
 - Support for research element, learning networks, tech support
5. The program will integrate farmer learning networks and other collaborative tools for co-production of benefits and improvements to the program overall over time.
6. The program will utilize existing technical support avenues (~~SWCD~~) [or list all possible avenues] to support implementation and the farmers.
7. The program will seek to provide high return to the farmer and society by managing overhead and administrative costs, the number of tools to be used, the asks of farmers, and the extent of technical services required. Value must equal or exceed effort made by farmers.
 - Elevate to guiding values/goals

⁴ Note that data privacy is related to the funder's requirements not the administrator's

8. To the greatest extent possible, the program will seek to use existing tools, data interoperability, and tools from existing programs for efficiency and ease of use.
- **Elevate to guiding values/goals**

Program Tools

1. A Vermont-tailored Cornell Comprehensive Assessment of Soil Health (CASH) test will be developed during Year One but a standard CASH test will be used in Year One as the Vermont-tailored one is developed.
- **Current CASH test does not work well as is for VT and may need tailoring for Y1**
2. Exact models to be used are to be determined but could include RSET, APEX, others, or some combination.
- **Emphasize as much as possible relying on farmer observation vs fancy tools (California approach). Don't leave out less technical tools.**
- **The state has been using models for measuring large P reduction against a statewide baseline, which can be adjusted. It's important to be aware of how the state is thinking about adjusting for local factors in making models.**
3. Models are preferred to be process-based to be more tailored and specific to Vermont.
- **Empirical-based models can also be specific to VT. Whatever the models used they need to be applicable/tailored to VT.**

Payments

- **Potentially reach out to NRCS to see if they could provide some matching funds. \$250k-\$1m is not that much.**
1. Payments will be based on evidence-derived values that consider both society's willingness to pay (WTP) and farmer's willingness to accept (WTA)
 - **Public engagement – help public understand how ES are related to their quality of life. Involve education and outreach.**
 - **Small, diverse farms might see the benefits more clearly (soil health is their product).**
 - **This is an argument for including edge of field in the program goals, rather than just in-field soil health.**
 2. The program will pay for: 1) practices that lead to quantifiable outcomes; 2) outcomes that are produced through various practices; 3) some combination of the two.
 - **Program goal - Does the WG want the program to be one that produces ES in a cost-effective manner or a means by which farmers can earn a livable wage? Income support vs environmental benefits.**
 - **Other countries use similar programs both for ES and for poverty alleviation**
 3. *Payments are for: 1) measured improvements in soil health from their farm's baseline (field, soil type, cropping type, etc.); 2) having a soil health score that is equal to or greater than a stated threshold (field, soil type, cropping type, etc.); 3) some combination (TBD); 4) how to account for payments for biodiversity and other potential non-soil health metrics?*

- Think through how WG would determine farm's baseline.

Pilot Development Process

1. WG will develop program parameters and elements by 31 May 2022, based on the UVM work to date, case studies, suggested program designs offered to date to the WG, and discussions and dialogue among the WG.
 2. AAFM plus small design team of PES WG members will work June-August 2022 to develop the program in detail based on the WG's parameters.
 3. WG will be kept informed via at least bi-weekly email updates.
 4. The PES WG may want to engage farmers in the program parameters and elements in early summer 2022, if possible, for comment and feedback.
- Important that we have a plan for making sure farmers can be engaged during farming season.
5. The Design Team will report back to the PES WG in September 2022.
 6. The PES WG will refine and hone final issues and questions with the Design Team.
 7. The pilot program will then be finalized, and implementation will begin by 31 December 2022.